

HISTORICAL MANAGEMENT APPLICATIONS IN THE MANAGEMENT OF YELLOWSTONE CUTTHROAT TROUT

Oncorhynchus clarki bouvieri



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INTRODUCTION

Yellowstone cutthroat trout (including the Snake River variety) are the indigenous trout found in Northwest Wyoming (Figure 1). Yellowstone cutthroat trout *Oncorhynchus clarki bouvieri* are currently the subject of a petition requesting the United States Department of the Interior to list them as threatened. Wyoming Game and Fish Department fisheries personnel estimate Yellowstone cutthroat trout (YSC) occupy 30% of the historical waters in the Cody region, 24% in the Sheridan region, 10% in the Lander region, and 90% in the Jackson region (WGFD, 1999).

Management crews located in Cody, Jackson, Lander, and Sheridan conduct the management of YSC stocks in Wyoming. The primary goal for management of native cutthroat has been to maintain or increase the supply and diversity of the species through habitat manipulation, stocking, and regulations.

The management crews have strived to maintain or enhance native wild trout populations in the face of changing environmental conditions, land practices, and the past stocking practices of various private, Federal, and state agencies. While concerned interests can easily find the negative aspects of fisheries efforts, they seldom bring attention to the positive employment of management efforts to maintain native fishes. With this thought in mind, the following management practices have been utilized to protect or enhance Yellowstone cutthroat trout stocks in a variety of fisheries that occur in northwest Wyoming.



Jackson Management Region.

DATE	WATER	ACTIVITY
1956	Moose Creek	Snake River cutthroat trout (SRC) were stocked to improve recruitment to Jackson Lake. Some 5,000 fry were released from 1956 through 1960 and again in 1962.
	North Moran Creek	Over 5,000 SRC were stocked from 1956 to 1961 in an attempt to imprint fry to return to spawn and provide recruitment of SRC in Jackson Lake.
1957	Drainage-wide	Genetic testing indicates no specific identifying characteristics exist between Yellowstone and Snake River cutthroat trout (200 samples) - work done by Dr. Miller.
	Fish Creek	Installed fish trap to study movement of cutthroat trout.
	Palisades Reservoir	Initial cutthroat trout stocking agreement with the state of Idaho regarding use of native species.
	Salt River	Modified East Side Canal flows to reduce cutthroat trout loss.
1958	Hoback River	Trap employed to monitor movement of SRC from Snake River.
1959	Farris Spring	Stocked 1,000 four to six inch SRC to reestablish cutthroat in the face of an existing population of brook trout.
	Spring, Flat, and Horse Creeks	Fingerling SRC or eyed eggs were planted in Horse Creek to supplement cutthroat stocks, and reestablish spawning runs of wild SRC.
1960	Salt River	1,364 pounds of whitefish were removed to lessen competition for space.
1961	Blue Crane Creek	Initiated construction of fish ladder to provide SRC access to the Blue Crane/Spring Creek complex from the Snake River.
	Salt River	Whitefish removal continued.
1962	Blue Crane Creek	Fish ladder construction completed and ladder was operational. Overpour traps were utilized to determine cutthroat run and spawning mortalities.
	Lost Lake	Reestablished historic cutthroat trout fishery with 3,600 cutthroat trout and also transplanted scuds to increase productivity.
	Salt River	Continue to remove whitefish.
1963	Crow Creek	Secured culverts for stream habitat restoration and fish passage.
1964	Bar BC, 3 Channel Spring Creek	2,000 fish were stocked in each stream in response to smaller cutthroat trout spawning populations since 1956.
	Crow Creek	Culverts were installed to restore flow to 1.5 miles of stream and provide fish passage.
	Granite Creek	Two brush shelters were inspected with Forest Service employees. Five brush shelters and one digger log were installed to provide fish passage and cover.
	Hoback River	Boulders placed in mid-stream. Riprap on second bend below V-V bridge. Gabions were placed by Forest Service above the mouth of Cliff Creek.
	Salt River	Whitefish continue to be removed.
		Sixteen jacks placed in double wing deflector pattern one half mile south of the Auburn-Grover Lane for bank stability.
	Teton Creek	Stream Bank treatment measures reviewed with Forest Service. Three of five improvements were satisfactorily done.
1965	Crow Creek	Culverts modified to reduce erosion and promote fish passage.
1966	Cranney Spring Creek	Structures including digger log, boards, and packs were all successful in providing habitat and riffle maintenance.
	Fish Creek	Boulders were placed over a 0.5 mile section of the creek on the Vandewater property to provide resting areas and cover.
	Lower Bar BC	47 oz. of SRC eggs were collected from brood stock for Lake-of-the-Woods replacement and to increase genetic diversity.

DATE	WATER	ACTIVITY
1967	Salt River	Sixteen stream jacks were set in the river approximately $\frac{3}{4}$ mile south of the Auburn-Grove Lane. The jacks were placed in a "V" pattern to prevent bank erosion.
	Snake River	Reduced creel limits from 12 to 6 cutthroat trout per day or in possession. Ecological evaluation with emphasis on harvest study.
	Yellowstone River	Eyed eggs placed in trays and set in the river near Heart Six hunting camp (not specified if Yellowstone Cutthroat or Snake River fish).
1968	Game Creek	Management plans require an annual plant of 3,000 fingerling cutthroat. Recommend check for natural reproduction in '69 and assess need for continued stocking.
	Gros Ventre River	Dikes repaired, this included placing boulder riprap as small jetty's approx. every 30 ft. to provide small eddies. These structures provided added instream habitat.
	Lower Murphy Lake	Installation gabions to raise level of lake about 2 feet and prevent winter-kill of cutthroat trout fishery.
	North Fork, Buffalo River	Cutthroat trout fingerlings were stocked in meadows above the upper falls to maintain wild stocks.
	Pritchard Creek	Beaver cuttings removed from mouth of culvert by hand and dams between road crossing and pond were dynamited to provide movement for spawning cutthroat trout.
	Snake River	Fish crew predicts levee construction will contribute to the reduction of cutthroat trout habitat in the Snake River. Ecological evaluation with emphasis on harvest study.
	Two Ocean Lake Creek	Planted Snake River cutthroat trout fingerlings along lower $\frac{3}{4}$ mile of creek to develop a spawning run.
1969	Bar BC Spring Creek	15,000 fingerling Snake River cutthroat trout planted to reestablish spawning runs.
	Blacktail Pond	Stocking policy changed from 2,000 catchables to 3,000 cutthroat fingerlings to promote maintenance of spawning SRC.
	Clear Creek Lake	Stocked with 2,000 fingerling cutthroat to maintain SRC fishery.
	Gros Ventre River	2,000 SRC planted in an experimental effort to increase the cutthroat population.
	North Fork Buffalo River	5,000 cutthroat fingerlings planted above junction of Eros Trail to maintain wild stocks of SRC above the trailhead.
	Salt River	Willow cuttings planted along river bank in Upper Burton easement for bank stability and overhead cover.
	Snake River	Ecological evaluation with emphasis on harvest study.
1970	Bar BC Spring Creek	Experimental plant of 5,265 eyed SRC eggs to imprint future spawning runs.
	Etna Slough	Stocked with fingerling cutthroat just north of lane fence to enhance and maintain SRC stocks.
	North Fork Buffalo River	Planted with 5,000 cutthroat fingerlings for wild stock maintenance.
	Palisades Reservoir	300,000 cutthroat sub-catchables released to maintain native fish in new reservoir.

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	Salt River	Willow cuttings and root systems were stocked along river banks in near the Auburn-Grover Lane to maintain integrity of banks and reduce erosion.
	Snake River	Ecological evaluation with emphasis on harvest study.
	Triangle X Spring Creek	Section surveyed to determine amount of suitable trout habitat. Silt is common over most of section for SRC enhancement potential.
1971	Bar BC Spring Creek	Unsuccessful attempt was made with hand spade to excavate gravel bars for cutthroat spawners.
	Gros Ventre River	Dike construction, 555 ft. of new dike and repair of 833 feet of existing dike. A bank stability project (Dr. Morris Skinner, CSU) to reduce braiding and develop fish habitat with proper riffle-pool-riffle production.
	Salt River	Approximately 100 willow slips were planted on Jensen easement, 150 slips on the Robinson easement to promote bank stability and reduce channelization.
	Three Channel Spring Creek	Main Fork - Three spawning beds with gravels obtained from pool development.
		Middle Fork - On lower half of the section logs were placed across the channel to provide overhead cover.
		West Fork - A few logs for cover, some spawning beds were excavated to provide additional spawning gravel.
1972	South Fork Fish Creek	112 cutthroat brood stock culled from Lake-of-the-Woods area tagged all stocked just south of the lake to determine movement and migration.
	Spread Creek	Jaw tagged 1,000 nine inch cutthroat and released at sites usually stocked to determine movement, migration, and survival information.
	Three Channel Spring Creek	Spawning cutthroat utilized the deep pools that were excavated and covered with logs.
		Middle Fork - Replaced washed away logs, 2 gravel beds and more logs were added.
		West Fork - 2 gravel jetties were constructed just above new gravel beds and logs placed to provide shelter. (Gravel beds constructed in both channel 1 and 2).
1973	Bar BC Spring Creek	Eyed SRC egg plant of 100,203 to imprint cutthroat stocks for future spawning runs.
	Blacktail Spring Creek	An emergency closure until Aug. 1 was imposed by Wyoming Game and Fish to reduce vulnerability of spawners to anglers.
	Fish Creek	4 low profile dams were constructed in channel and 4 dams were constructed on high water channel, several pools were excavated and trees placed over them for habitat enhancement.
	Flat Creek	A 50 foot long channel dug next to bank to provide cover for resident fish, also 50 feet of gravel rejuvenation approximately 100 yards above feedground bridge. A pool was constructed to provide additional cover for resident cutthroat. A large cottonwood was placed over the pool for cover, 200 cutthroat were placed in area of improvements.
	Game Creek	300 catchable cutthroat were jaw tagged and released to determine movement and migration.
	Hoback River	Boulders placed in river as part of highway development mitigation work for fisheries habitat.
	Skull Creek	Log and rock dams were built to allow fish movement and migration.
	Snake River	About 2,300 feet of bank was diked and riprapped. The dike included seven groin type projections for fish habitat enhancement.

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	Snake River	Special regulations imposed by the Wyoming Game & Fish Dept. on that segment of the river within Grand Teton National Park. Creel limit reduced from 6 to 2 cutthroat trout per day or in possession.
1974	Bar BC Spring Creek	Corps of Engineers constructed 1,000 feet of low profile dike, after bank washed out, to protect spawning channel.
	Flat Creek	Excavated 4 pools and constructed gravel beds with backhoe, dead trees were placed over 2 pools, commercial spawning gravel was placed on 2 cobble riffles.
	Gros Ventre River	Restrictive angling regulations were initiated on one segment of the upper river with the use of artificial flies only.
	Hoback River	Fourteen conifers were cabled to the river-bank for fish habitat/cover.
	Little Bar BC Spring	For spawning channel development, two pools were excavated and constructed with gravels placed below the pools. Commercial gravels were deposited over two riffles, while several logs were placed over the pools. Willow tree limbs were placed over the pools as well, and small limbs were stuck into the banks to determine if new growth was possible.
	Pacific Creek	The WGFD implemented restrictive angling regulations below the Wilderness boundary by the use of artificial flies only.
	Polecat Creek	Dead trees and 3 tree tops were placed along the banks to provide overhead cover.
	Salt River	One load of rock placed as jetty above Sanderson Gooseneck, 24 loads of rock were placed in a 60-foot jetty to protect eroding bank below the Etna Lane Bridge. Several trees were placed along banks as a further stabilization measure.
	Spread Creek	12,750 jaw tagged catchable cutthroat were stocked to provide movement and migration information.
	Three Channel Spring Creek	Main Fork - 5 additional pool/riffles were excavated on the lower section; trees were placed over the pools to provide overhead cover. Middle Fork - additional cover added, another pool was excavated.
1975	Bar BC Spring Creek	102,054 eyed SRC eggs were stocked, and spawning riffles were excavated while trees were placed over the pools for additional cover.
	Blue Crane Creek	Made redd counts to determine relative size of spawning run and general well being of Snake River SRC fishery.
	Christensen Spring	Habitat improvement for cutthroat spawners was completed with the construction of 17 pools and riffles, and the development of 50 feet of undercut banks.
		Two pools were constructed with islands downstream of each, 7 deflector bars were constructed to increase flow depth and velocity of excavated pools and spawning gravels. Willow limbs were planted along deflector bars.
	Gros Ventre River	Experimental snorkel transects were made 1 mile below Kelly in hopes to determine relative cutthroat abundance.
	Little Bar BC Spring Creek	51,027 eyed SRC eggs were planted to establish a new spawning run of SRC. There was a hatching mortality of approximately 7.9%. Spawning riffles were extended another 20 feet, and a new gravel riffle was also constructed.
	Price Spring	3 riffles were constructed with commercial gravel; trees were placed at 4 locations.
	Salt River	About 400 feet of dike and tree revetment was constructed on the Ted Hale easement. Riprap and trees were anchored on Perkes easement.

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	Skull Creek	The fish ladder constructed in 1973 has been successful in allowing the movement of cutthroat trout.
	Spread Creek	750 jaw tagged, catchable cutthroat were stocked in the study section to determine movement and migration.
	Three Channel Spring Creek	Main Fork, three pool/riffles were excavated and trees were placed over the pools to maintain spawning habitat.
		East Fork, three cobble riffles were excavated on the lower section; trees were placed along the banks for overhead cover.
		Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
	Upper Bar BC Spring Creek	Planted 102,054 eyed SRC eggs at 2 sites on the West Fork to imprint and increase spawning of wild SRC in the Snake River between the dam and GTNP headquarters.
1976	Bar BC Spring Creek	Approximately 17,958 SRC eggs were stripped from 8 females and transported to the Dubois Hatchery to upgrade genetic variability of the brood stocks.
		Planted 154,368 eyed SRC eggs to imprint wild SRC stocks.
	Blue Crane Creek	Made redd counts to determine relative size of spawning run and general well being of Snake River SRC fishery.
	Christensen Spring	Eight new pools were excavated in this spawning tributary, while six existing pools were excavated of silts to enhance escape cover.
	Flat Creek (NER)	Initiated special regulation with angling permitted by the use of artificial flies only.
	Little Bar BC Spring Creek	Planted 62,112 eyed SRC eggs to initiate a new run of wild SRC.
	Salt River	Tree revetment and rock placement jobs were completed on 7 private properties and three fishing easements. The work involved placement of 114 trees and 82 loads of rock to reduce bank erosion and channel alteration.
	South Fork Fall Creek	Old meander channels were reestablished by deepening the upper part of the channel, a digger log was placed at the lower end of straight channel to decrease the velocity. Channel stabilization will maintain or enhance existing fishery habitat.
	Three Channel Spring Creek	Adequate spawning gravel is one of the limiting factors that regulates the number of mature trout in the Snake River. Hand picked and removed cobble rock from most recent excavated riffles on Main and Middle Forks.
	Upper Bar BC Spring Creek	A group of tree branches was placed on segments of the lower pond for fry/fingerling SRC protection.
		Planted 169,744 eyed SRC eggs to imprint future SRC runs.
		Cobble rock was removed by hand from known spawning gravels
		Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
1977	Bar BC Spring Creek	Planted 79,148 eyed SRC eggs to imprint spawners and maintain wild SRC populations in the Snake River fishery.
	Blue Crane Creek	Made redd counts to determine relative size of spawning run and general well being of Snake River SRC fishery.
	Christensen Spring	32 pools were excavated with either island retards or deflector bars constructed to enhance spawning habitat.

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	Flat Creek	38 mature SRC were tagged to assess movement and migration.
	Price Spring	Beaver dam removed to facilitate movement of spawning SRC from the Snake River.
	Salt River	Fishing season changed to a calendar year season below Upper Narrows Bridge. The change was to distribute opening day pressure and to control the number of brown trout spawners present in the fishery.
	Snake River	Minimum flow controversy was initiated when the Bureau of Reclamation reduced flows from Jackson Lake Dam to 100 cfs. Spawning assessment in the major tributaries in the spring of 1978 indicate losses of cutthroat was minimal.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
	Upper Bar BC Spring Creek	Planted 179,914 eyed SRC eggs to imprint and maintain wild Snake River stocks. Additional stocking was advocated as a result of the continued loss of river habitat due to COE levee construction and the loss of flushing flows in the spring creeks systems that were formerly affected by spring flood flows from the Snake River.
1978	Blue Crane Creek	Made redd counts to determine relative size of spawning run and general well being of Snake River SRC fishery.
	Christensen Spring	Survey work indicated that the excavation of pools, overhead cover, and rejuvenation of riffles had a positive effect on SRC numbers and size.
	Gros Ventre River	An assessment of the aquatic habitat completed by Dr. Morris Skinner of CSU resulted in the development of an 800 foot stabilization site near the Gros Ventre campground. The project was designed for channel stabilization and to reduce extensive braiding that has reduced instream trout habitat.
	Jess Spring Creek	Stream treatment for additional spawning. Stocked with 4,008 sub-catchable SRC.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
	Lower Bar BC Spring Creek	Eggs were collected to provide brood replacement at Lake-of-the-Woods.
	Snake River	A comprehensive review and summary of Snake River life history parameter was presented as WGFD Fisheries Technical Bulletin No. 3 and entitled <i>Studies On the Ecology Of The Snake River Cutthroat Trout – 1978</i> .
	Turquoise Lake	Several cutthroat were collected and were strikingly different from SRC and did not appear as typical YSC.
	Upper BC Spring Creek	Increase in spawners, largest since 1964, attributed to eyed egg plants and natural increase of spawning guards during 1971 and 1972, this data indicates the Snake River population is density dependant upon the amount of available spawning gravels available in primary tributaries. 106,350 eyed SRC eggs planted for wild trout maintenance.
1979	Bar BC Spring Creek	76,272 eyed SRC eggs planted to imprint and maintain wild trout stocks migrating from the Snake River.
	Blacktail Spring Creek	Large increase in spawners due to increase of available gravel, further demonstrates that gravel is a limiting factor for stock density of Snake River population.
	Blue Crane Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.

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	Christensen Spring	Electro fished and tagged 21 fall spawning cutthroat to determine movement and migration.
	Flat Creek	100 yards of eroding and slumping banks section were also treated with a tree revetment to stabilize the bank and provide fish cover.
	Granite Lake	Reintroduction of cutthroat trout has established at least 4 year classes of trout.
	Gros Ventre River	4 small trees were anchored into problem area of stabilization area to reduce velocity and divert flow. Snorkeling observations indicate cutthroat are more readily found in pools and deep runs.
	Little Bar BC Spring Creek	30,476 eyed SRC eggs were planted as per the continuing effort to develop of a new SRC spawning run.
	Lower Bar BC Spring Creek	Eggs were collected from 7 females, for brood replacement at Lake-of-the- Woods.
	Salt River	225 willow shoots and 57 trimmed links were planted at six different revetment sites. 6 trees added to the Miller Bend revetment and 8 tree revetment was constructed to plug an eroded hole in the East bank below the Etna Lane.
		14 tree revetment constructed along west bank above Etna Lane.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
	Three Channel Spring Creek	30 cutthroat were tagged to gain movement and migration information pertinent to spawning trout using this particular tributary. Over 10.8 tons of gravel was used to construct 5 new spawning riffles in the East Fork.
	Upper Bar BC Spring Creek	Cobble was manually removed from gravel spawning riffles on the West Fork.
1980	Blue Crane Creek	38,544 eyed SRC eggs were planted in this spring creek system to rejuvenate and imprint spawning cutthroat stocks from the Snake River.
		Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Little Bar BC Spring	Beaver dams were removed to allow for passage of spawning SRC.
	Lower Bar BC Spring Creek	Eggs were taken from SRC to increase diversity of hatchery brood stock located at the Dubois Hatchery.
	Salt River	1,053 feet of tree revetment and 15 loads of rock were used to prevent major channel changes and cut across activities.
		Bank stabilization was completed on the Nield and Kennington section of upper valley below Nield Lane.
		Population crew determined that there were greater numbers of 200 mm trout in the revetment areas of the Salt River project area.
	Snake River	Programmed Creel Survey was conducted to determine the use and general well being of the SRC fishery.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
	Three Channel Spring Creek	Thirteen spawning riffles were constructed on the middle fork.
	Upper Bar BC Spring	167,980 eyed SRC eggs were stocked to maintain wild SRC stocks.
1981	Blue Crane Creek	95,630 eyed SRC eggs were stocked in February in an attempt to renew historic March spawning runs.
	Blue Crane Creek	In July, an additional 100,000 eyed SRC eggs were placed in two hatching troughs to develop multiple spawning runs in the same year.
		7 new riffles were constructed using 51 tons of commercially washed gravels. Three pools with overhead cover were also constructed.

DATE	WATER	ACTIVITY
		Crew personnel met with the landowners of the Blue Crane Spring Creek Complex regarding habitat work that could be done on their section of Three Channel Spring Creek to enhance spawning cutthroat recruitment from the Snake River.
		Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Flat Creek (NER)	20 trees were transplanted along eroded banks to promote bank stabilization.
	Little Bar BC Spring Creek	90,000 eyed SRC eggs were stocked to imprint initiate the development of a new run of wild SRC.
	Lower Bar BC Spring Creek	99 tons of commercial gravel was placed at 6 riffles sites above the trap and two trees were placed for overhead cover.
	Salt River	Bank erosion was mitigated with 40 loads of rock, 740 feet of new tree revetment, 180 feet of salvaged tree revetment and 6 trees to prevent back cutting. Other miscellaneous maintenance included placement of 12 trees and 37 loads of rock at 7 separate sites.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
	Upper Bar BC Spring Creek	Beaver dam was removed to facilitate movement of cutthroat trout spawners. 144,083 eyed SRC eggs were planted to enhance and maintain SRC spawning runs.
1982	Blue Crane Creek	The Jan.- March stocking of 25, 415,790 eyed SRC eggs continues in an effort to reestablish historic early runs of cutthroat and develop to seasonal runs of trout.
		In July, 305,088 eyed SRC eggs were placed in hatching troughs as part of the effort to develop two seasonal runs.
		Three loads of gravels were used for riffle construction on the Jenkins property, while twelve loads of gravel were used on the Oliver property. Five loads were used on the Porter estates, three pools were excavated and overhead cover was put in place.
		Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Flat Creek	One new tree revetment was constructed, and trees were added to old revetments in need of maintenance for bank erosion purposes.
	Gros Ventre River	Six truck loads of riprap material was used at the stabilization site designed by Dr. Skinner to promote fishery habitat development.
	Lower Bar BC Spring Creek	Eight females were stripped of 72,264 (28 oz.) eggs for brood stock replacement at the Dubois Hatchery.
	Pacific Creek	Restrictive regulations were made from the confluence to the Forest Wilderness boundary, will provide for angling with the use of artificial flies and lures only.
	Salt River	10 loads of rock, 10 loads of gravel, and 600 feet of tree revetment were used in maintenance of banks and channels.
		Treated several small cut-across segment of channel with rock and tree revetments.

DATE	WATER	ACTIVITY
	Salt River	Lower segments of the river were treated with 600 cubic yards of rock to prevent further bank erosion. This was supplemented with nearly 4,200 feet of tree revetments and over 1,000 feet of fence.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
	Three Channel Spring Creek	Seven trees were cabled into place in the main fork to serve as additional cover for fry and fingerlings.
1983	Blue Crane Creek	Over 453,000 eyed SRC eggs were stocked in hatching troughs to maintain wild cutthroat spawning runs in the Snake River system.
		Half-log fish habitat devices were installed to provide additional overhead cover.
		Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Hidden Creek	Cutthroat trout were collected from this Pacific Creek drainage stream and shipped to Dr. Robert Behnke for genetic analysis relating to YSC and SRC identification.
	Little Bar BC Spring Creek	Several large beaver dams were removed to provide movement to migrating spawning SRC.
	Lower Bar BC Spring Creek	Nearly 18,000 eggs were collected from wild stock to replenish Lake Of The Woods brood stock and to maintain genetic diversity.
	Salt River	Segments of the lower Salt River were treated with 815 cubic yards of rock, and 4,700 linear feet of tree revetment to reduce bank erosion and channel stability.
		Another site on the lower Salt River was protected with 650 cubic yards of rock, 500 feet of fence, and approximately 1,160 feet of tree revetments for bank protection and channel maintenance.
		Additional treatment of problem sites requiring 18 yards of rock, and 380 feet of tree revetment was needed to repair existing revetments and prevent the river from flowing into Christensen Spring Creek and destroying spawning tributary habitat.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
	Yellowstone River (Thorofare waters)	Letters were sent to outfitters and user groups to discourage angling on wild cutthroat stocks. Signs were also placed at the wilderness trailheads, and on site.
1984	Blue Crane Creek	Over 449,000 eyed SRC eggs were stocked in hatching troughs in the upper reach of this spring creek to supplement wild stocks migrating from the Snake River post rehabilitation work.
		Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Flat Creek (NER)	Addition deflectors and trees were used for fisheries habitat rehabilitation.
	Little Bar BC Spring Creek	Beaver dams were removed to facilitate movement of spawning cutthroat trout from the Snake River.
	Lower Bar BC Spring Creek	Over 16,000 eggs were taken from wild cutthroat trout for brood stock replacement at Lake Of The Woods.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
1985	Blue Crane Creek	A total of 76 sites were treated and improved for fisheries needs in regard to spawning gravels and the removal of silts from existing pools and promoting the movement of fish in long runs.
	Blue Crane Creek	Over 478,000 eyed SRC eggs were stocked in hatching troughs to re-

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		establish spawning runs of wild Snake River cutthroat.
		Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Fish Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Flat Creek (NER)	Over 3,200 feet of stream was rehabilitated with 30 deflectors, 800 feet of tree revetments, 1,300 feet of boom covers, and 100 feet of rock rip rap. Pools were excavated and existing riffles were rejuvenated. This major wild cutthroat project was conducted on the National Elk Refuge.
	Lower Bar BC Spring Creek	Eggs were collected from wild cutthroat for brood stock replacement and genetic diversity needs at Lake Of The Woods.
	Snake River	Programmed Creel Survey was conducted to determine the use and general well being of the SRC fishery.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
1986	Blue Crane Creek	Two silt catch basins were developed on the Brown Ranch to lessen the impact of spring irrigation water imports from the Snake River during spring run-off.
		Hatching troughs received 794,100 eyed SRC eggs for the maintenance of spawning runs of wild trout. Hatching studies indicated trough to which gravel had been added to the bottom produced fry 0.4 to 2.3 mm larger than troughs without added gravels.
		Habitat rehabilitation activities involving the development of 148 pools, 113 riffles, and silt removal from 51 sites that promoted upstream fish movement.
		Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Ely Spring Creek	A trac-hoe was used to remove silt from the Boyles Hill catch basin and adjacent ponds that function to catch silt from irrigation waters.
	Fish Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Fish Creek and Giltner Spring Creek	New fencing was added to this important spawning system. A water gap was constructed and willows were re-planted along segments of the stream.
	Lake-of-the-Woods	Over 20,000 SRC eggs were obtained for use as broodstock maintenance and diversity. WGFD lab personnel analyzed ovarian fluids and eggs for disease parameters and ran traditional protein work for general genetics parameters.
	Little Bar BC Spring Creek	Pulled beaver dams to allow migration of spawning cutthroat from the Snake River.
	Price Spring Creek	Crew personnel provided technical assistance and supervision in the placement of deflectors and pool development by the landowner.
	Salt River	Perkes access was treated with two tree revetments totaling 371 feet. These sites were reinforced with 192 cubic yards of rock and 345 feet of the treated area was fenced. All habitat work was initiated to maintain channel stability and integrity.
	Snake River	A slot limit, in Grand Teton National Park, was set in place by the WGFD. The creel limit was set at 4 trout per day or in possession with only one trout over 15 inches in length. This includes all tributaries to the Snake River between Jackson Lake Dam and Moose, excluding the Buffalo Fork River.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.

DATE	WATER	ACTIVITY
1987	Blue Crane Creek	Some 344,395 eyed SRC eggs were stocked in the upper reaches of this spring creek to re-establish spawning runs of wild cutthroat trout from the Snake River.
		Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Christensen and Jess Spring Creeks	Brook trout were removed from segments of these spring creeks to reduce their presence and influence on wild cutthroat stocks.
	Fish Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Flat Creek (NER)	Four habitat structures were constructed using boom covers. A rock funnel, riprap and excavation of pools was also completed at these sites.
	Lower Bar BC Spring Creek	Twenty-nine wild SRC females were spawned to provide brood stock for the Jackson National Fish Hatchery and the Wyoming Game & Fish Department hatchery located in Tensleep.
	Snake River	Tissue samples were collected from 10 SRC for genetic analysis by BYU researchers. This is a continuing effort to ascertain the genetic and taxonomic designation of Snake River cutthroat trout as a specific subspecies.
		An instream flow study was initiated to determine winter flow needs and reservoir release rate effects on wintering SRC and this has been reproduced as a WGFD administrative report entitled <i>Snow River Instream Flow Studies – 1987</i> .
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
1988	Blue Crane Creek	Over 400,000 eyed SRC eggs were stocked in hatching troughs located in the upper reaches of this spring creek to maintain runs of spawning SRC from the Snake River.
		Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Drainage-wide	24 SRC were tested for the presence of <i>Myxobolus cerebralis</i> .
	Fish Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Flat Creek (NER)	Electrofishing was conducted in the segment of creek in which habitat improvement measures were constructed. Population analysis indicates the stock densities levels have increased from 40 to 401 cutthroat trout per mile as a result of the rehabilitation of habitat.
	Lower Bar BC Spring Creek	Commercially washed spawning gravels were stocked to replenish those lost through spawning activities. Additional dead and down trees were placed along the bank to curtail wildlife and livestock animal use as crossings.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
1989	Blue Crane Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
		A total of 151 sites were treated for fish habitat and spawning development. The removal of silt, gravel rejuvenation, stocking of commercially washed gravels, and pool development were the methods used in this treatment.
	Drainage-wide	108 SRC, 2 rainbow trout, 12 brown trout, and 21 mountain whitefish were tested for the presence of <i>Myxobolus cerebralis</i> .
	Fish Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Little Greys River	Reviewed fishery rehabilitation effort by Forest Service and provided

DATE	WATER	ACTIVITY
		technical assistance.
	Lower Bar BC Spring Creek and Three Channel Spring Creek	Approximately 45,000 eggs were collected from wild spawning cutthroat trout and transported to the Federal Hatchery in Jackson and the State Hatchery in Tensleep, Wyoming for brood stock diversity use.
	Snake River	The instream flow study initiated in 1987 to address the impacts of various reservoir release rates on the physical habitat for wintering trout has been completed and has been produced as a WGFD administrative report entitled <i>Snake River Instream Flow Studies – 1989</i> .
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
1990	Blue Crane Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery
	Fish Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Flat Creek (NER)	Habitat enhancement of segments of the creek was completed with the placement of boulders over boom cover structures. Sediment trap pools were excavated as necessary.
		Restrictive regulations were implemented by the WGFD to provide fishing with artificial flies only, with 2 cutthroat trout per day or in possession. All cutthroat trout between 11 and 18 inches in length must be released. Regulations developed to accommodate increased numbers of anglers.
	Flat Creek (Salt River Drainage)	Habitat project below Thayne Lane was initiated with the excavation of 18 pools, 12 deflectors, and the riffles adjacent to the pools were cleaned and flushed.
	Grey's River	The upper Greys River has the best remaining habitat and was placed under special regulations, while all stocking of hatchery cutthroat was deleted. From the Murphy Creek Bridge upstream, the limit on cutthroat trout was reduced from 6 to 2 trout, with a protective slot of 11 to 16 inch fish. Fishing was permitted with artificial flies and lures only.
	Jackson Lake	Nearly 25,400 advanced SRC fingerlings were stocked by barge in the upper reaches of the lake as BR mitigation to replenish stocks that may have been affected by Jackson Lake Dam construction draw down and drought conditions.
	Lower Bar BC Spring Creek	SRC Broodstock was enhanced with wild trout eggs taken from 60 females.
	Salt River	Habitat enhancement and protection of banks was accomplished with the construction of tree revetments in two segments totaling nearly 500 feet of bank. A total of 180 cubic yards of rock was used to protect the revetment ends.
		A 9.0 mile reach of the river was placed into special regulations to enhance and measure the response of the fishery. The segment from Thayne Lane to the Silverstream Lodge Bridge was reduced to 4 trout per day or possession, with only one trout greater than 18 inches. The protective slot was set at 11 – 18 inches inclusive.

DATE	WATER	ACTIVITY
	Snake River	The special regulation segment of the river was extended to the Wilson Bridge. The newly adopted 11-18 inch slot limit extends greater protection to spawning cutthroat with a 6 fish per day possession limit (only one of which may exceed 18 inches in length). This includes all tributaries between Jackson Lake Dam and the Wilson Bridge, excluding the Buffalo Fork, Gros Ventre, Ditch, Spread, and Pacific Creek.
		Programmed Creel Survey was conducted to determine the use and general well being of the SRC fishery.
		An instream flow agreement was formally signed that will provide 33,000 acre-feet of storage in Palisades Reservoir to be used to augment winter flows when necessary. This is a last in right water right that is only available when the water is available and all prior rights have been filled. This was storage contract number 1-07-10-W0823 between the State of Wyoming and the Bureau of Reclamation.
	Spring Creek (Crescent H Ranch)	Eyed SRC eggs, 14,892, were stocked in hatching boxes to maintain wild trout stocks in Fish Creek and the Snake River.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
1991	Three Channel Spring Creek	SRC Broodstock diversity was maintained with the selection of 48 wild SRC females from which a limited amount of eggs were taken for hatchery use.
	Wilderness Waters	All water in designated Wilderness areas were reduced from a 6 to 2 trout limit per day or in possession. In addition a 10 additional brook trout (8 inches or less) was applied to reduce non native stocks of fish.
	Blue Crane Creek	Removed beaver dams that precluded access to fish ladder and movement of spawning cutthroat from the Snake River.
		Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery
	Fish Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Jackson Lake	A total of 21,074 SRC were stocked in the north end of Jackson Lake as mitigation for dam construction and resultant draw-down of lake.
	Lamb Spring Creek	Spawning habitat enhancement work was initiated with the development of 14 potential spawning riffles and 22 pools. The channel was narrowed in spots and commercially washed drain rock was stocked for spawning.
	Moffet Creek	Beaver dam pulled from culvert to provide upstream migration of spawning cutthroat.
	Price Spring Creek	Removed beaver dams to facilitate movement of spawning cutthroat trout from the Snake River.
	Salt River	East bank near AG Lane was treated with over 1,800 feet of barbed-wire fence. The fence was set back about 50 feet from the bank for protection from grazing. Willow clumps were transplanted with a backhoe in the same section.
		Nearly 1,300 feet of eroded bank was protected with tree revetments.
	Spring Creek Two (Crescent H Ranch)	Over 31,600 eyed SRC eggs were stocked in stream-side incubators to enhance Fish Creek and Snake River Spawning runs.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
	Trail Creek	Beaver dam pulled from culvert to provide upstream migration of spawning cutthroat.
1992	Blue Crane Creek	Made redd counts to determine relative size of spawning run, and well

DATE	WATER	ACTIVITY
		being of Snake River SRC fishery
	Fish Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Jackson Lake	Mitigation stocking of SRC was completed in the north end of the lake with some 23,537 fish.
	Lamb Spring Creek	Newly constructed incubators were used to stock 100,368 eyed SRC eggs.
	Price Spring	Beaver dam was removed to facilitate movement of spawning SRC from the Snake River.
	Salt River	A rock barb was constructed below the AG Lane for bank stabilization purposes. Additional riprap was placed along two other sites to prevent bank erosion and maintain willow bank habitat.
	Spring Creek One and Two (Crescent H Ranch)	Eyed SRC eggs were stocked to enhance future movement of spawning fish into newly enhanced spawning sites.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
1993	Blue Crane Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Fall Creek	Over 2,500 sub catchable SRC were stocked in the upper reaches to re-establish stocks lost during prolonged draught conditions.
	Fish Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Flat Creek (Salt River Drainage)	Eyed SRC eggs (50,000) were stocked to develop run of wild trout into this Salt River tributary.
	High Mountain Lakes	Fish, Bearpaw, and Trapper Lakes were stocked (SRC) by horse pack to maintain native trout fisheries. The upper reaches of the Salt River were also stocked with SRC by Horse pack to maintain cutthroat stocks effected by drought conditions.
	Jackson Lake	The continued mitigation stocking of SRC into the upper reaches of lake continued with some 18,885 trout.
	Lamb Spring Creek	A total of 60,000 eyed SRC eggs were stocked in incubators as part of the spawning run development project.
	Salt River	Rock barb was constructed to redirect high flows and reduce velocities for bank protection.
	Spring Creek Two (Crescent H Ranch)	Nearly 50,000 eyed SRC eggs were stocked in a continuing effort to establish new runs of cutthroat to stream rehabilitation segments.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
	Three Channel Spring Creek	Spawning gravels were added to six sites below Newton property to facilitate additional spawning opportunities for wild SRC from the Snake Rive.
	Yellowstone Park	Assisted in the collection of YSC eggs collection to establish brood stock for use in Yellowstone River drainage waters.
1994	Blue Crane Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Fish Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Snake River	Programmed Creel Survey was conducted to determine the use and general well being of the SRC fishery.
	Spring Creek one and two (Crescent H	Stocked 40,000 eyed SRC eggs to maintain and enhance Fish Creek and Snake River wild trout fisheries.

DATE	WATER	ACTIVITY
	Ranch)	
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
1995	Bearpaw and Trapper Lakes	Stocked SRC by horse pack to maintain native cutthroat fishery
	Blue Crane Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Buffalo Fork River	Developed restrictive fishing regulations will reduce creel to 3 fish, only one over 12 inches.
	Cody Creek	Eyed SRC eggs (50,000) were stocked to promote wild trout runs back to this system from the Snake River.
	Drainage-wide	27 SRC, 1 rainbow trout, and 12 rainbow/cutthroat trout hybrids were tested for the presence of <i>Myxobolus cerebralis</i> .
	Fish Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Flat Creek (Salt Drainage)	Over 50,000 eyed SRC eggs were stocked in an incubator on Eliason property to reestablish historic spawning runs for the Salt River.
	Flat Creek	Stocked over 30,000 eyed SRC eggs at the outlet of Flat Creek Lake to enhance cutthroat runs in the upper drainage.
	Lamb Spring	Over 100,000 eyed SRC eggs were stocked for the continued management plan to establish a new spawning run from the Snake River. Stocking of two generations (8 years) is necessary to ensure year class representation.
	Lower Bar BC Spring Creek	Eggs (500) were obtained from wild Snake River fish for DNA diversity brood stock evaluation.
	Salt River	Stocked 50,000 eyed SRC eggs in upper Salt River in attempt to re-establish wild trout runs.
	Snake River Drainage	Sub Basin Management Plans were completed for the general management of all waters within the Jackson Fish Management Region.
	Spring Creek – Crescent H Ranch	Stocked 50,000 eyed SRC eggs in Spring Creek 1 and 2 to maintain and enhance spawning runs in Fish Creek/Snake River.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
1996	Blue Crane Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Cody Creek	Over 50,000 eyed SRC eggs were stocked to initiate new runs trout in newly renovated spring creek.
		Made redd counts to determine relative size of spawning run and determine the success of eyed eggs plants.
	Crescent H Ranch Spring Creek 2	Over 40,139 eyed SRC eggs were stocked in this tributary to Fish Creek and the Snake River to promote wild trout spawning runs.
	Drainage-wide	WGFD and Forest Service discuss and develop survey of Snake River drainage to assess distribution of YSC/SRC.
		53 SRC, 211 mountain whitefish, 66 brown trout, 98 rainbow trout, and 7 rainbow/cutthroat trout hybrids were tested for the presence of <i>Myxobolus cerebralis</i> .

DATE	WATER	ACTIVITY
	Fish Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Flat Creek (NER)	Reduced creel of cutthroat trout with more restrictive regulations. Limit of one cutthroat trout per day or in possession, with only one fish exceeding 20 inches.
	Flat Creek & Salt River Drainage	Stocked 130,000 eyed SRC eggs to re-establish runs of wild trout.
	Jackson Fish Management Region	Sediment samples were collected from 30 streams in the area to test for <i>Myxobolus cerebralis</i> analysis in Laramie Lab.
	Lamb Spring	100,000 eyed SRC eggs were stocked to promote new spawning tributary rehabilitation. The first generation from this egg-plant ran this year with six new redds identified.
	Pacific Creek	Initiated a restrictive regulation allowing the harvest of 3 trout per day or possession. A protective slot of 11 to 18 inches, with only one cutthroat exceeding 18 inches.
	Snake River	A total of 98 pairs of wild SRC were partially spawned to obtain eggs to rejuvenate brood stocks.
		Management crews assisted Bureau of Reclamation personnel obtain 30 SRC that were fitted with radio tags to study winter distribution and migration studies.
		A drop in the number of spawning cutthroat utilizing the spawning tributaries south of the Wilson Bridge precipitated a regulation restricting the harvest of spawning size class fish. Limit of 3 fish per day or possession, while only one fish could exceed 12 inches.
		An agreement was finalized between the Bureau of Reclamation and the State of Wyoming (State Engineers Office) for the use of contracted waters to be used for instream purposes. This document is entitled <i>Guidelines for Decision-making in Operation of Wyoming's Contracted Space in Palisades Reservoir – 1996</i> .
	Soda Lake	Imposed restrictive regulation with a limit of only one cutthroat that exceeds 20 inches in length. Fishing restricted to artificial flies and lures only.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
	Three Channel Spring Creek	Stocked 130,000 eyed SRC eggs at three sites to maintain wild stocks in Snake River proper.
	Upper Bar BC Spring Creek	Increased spawning runs noted and attributed to increased stocks associated with special regulation on the Snake River.
	Salt River	Over 50,000 eyed SRC eggs stocked on Burton property to renew runs of wild cutthroat stock.
		A total of 353 fish (whitefish, cutthroat, brown, and rainbow trout) were collected for Whirling Disease sample analysis.
1997	Blue Crane Creek	Eyed SRC eggs (120,000) were stocked in the upper reaches of this spring creek to rejuvenate spawning runs of wild stock from the Snake River.
		Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Cody Creek	Over 50,000 eyed SRC eggs were stocked as part of an eight year (two generation) plan to initiate spawning runs.
	Cody Creek	Made redd counts to determine relative size of spawning run , and success of eyed egg plants.

DATE	WATER	ACTIVITY
	Drainage-wide	77 SRC, 2 mountain whitefish, 78 brown trout, 56 rainbow trout, and 6 splake were tested for the presence of <i>Myxobolus cerebralis</i> .
	Fish Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Flat Creek (Salt River Drainage)	Over 50,000 eyed SRC eggs were stocked in incubators in the third year of an eight-year program to initiate return of wild cutthroat in the spawning run.
		Sentinel fish (54 SRC fingerlings) were removed from a holding cage and sent to the WGFD lab for whirling disease analysis. Tests on these fish proved to be negative.
	North Fork Spread Creek	Technical assistance was provided to Forest Service and Teton County Natural Resources in a project designed to relocate the stream channel back into its historic alignment.
	Salt River	Eyed SRC eggs, 50,000, were stocked in an incubator in order to imprint and provide additional spawning of native cutthroat trout.
		Over 200 cubic yards of boulder riprap was used to protect channel integrity from lateral erosion.
	Snake River	Thirty mature SRC were captured and fitted with radio tags as part of the Telemetry Study to determine fall/winter movement.
	Spring Creek Two (Crescent H Ranch)	Nearly 40,000 eyed SRC eggs were stocked in a continuing effort to add imprinted fish to the Fish Creek, Snake River spawning runs and utilize increased spawning habitat available in the system.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
1998	Three Channel Spring Creek	Eyed SRC eggs, 100,000, were stocked in incubators in response to increased spawning habitat projects completed on the system.
	Blue Crane Creek	Over 112,000 eyed SRC eggs were stocked in the upper reaches of this spring creek to maintain and enhance runs of wild cutthroat trout from the Snake River. Additional spawning habitat enhancement will be completed on this tributary in 1999.
		Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery
	Cody Creek	Made redd counts to determine relative size of spawning run, and success of eyed egg stocking.
	Drainage-wide	Initiate survey of Snake River drainage to assess distribution of YSC and SRC. Forest Service crews and monies are carrying most of the field-work.
		14 SRC, 19 mountain whitefish, 19 brown trout, and 2 brook trout were tested for the presence of <i>Myxobolus cerebralis</i> .
	Fish Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Flat Creek (Salt River Drainage)	In the continuing project to imprint wild cutthroat stocks in the Salt River system, 50,000 eyed SRC eggs were stocked in incubators.
	Jess Spring (Salt River Drainage)	In continuing efforts to understand WD and its presence in the Salt River drainage, 43 SRC sentinel fish were caged in this spring creek. No documented loss of fingerlings was noted in the drainage. Although no clinical signs of infection were noted, 10 percent of the sample was whirling disease positive.

DATE	WATER	ACTIVITY
	Lamb Spring Creek	The programmed use of 74,399 eyed SRC eggs continued in an effort to imprint spawning runs from the Snake River into this newly created spawning site. A change in natural water supply dictates the need to extend the current eyed egg stocking program.
	Lower Bar BC Spring Creek	Additional eggs were sampled from wild stock to assess broodstock disease studies.
	Snake River	Special regulation analysis from the Snake River spawning tributaries north of the Wilson Bridge indicates a distinct increase in the average size of large cutthroat.
		USFWS-YNP notified WGFD that New Zealand mud snails were found at south boundary of YNP. Crew personnel found New Zealand mud snails in the Snake River near the Flagg Ranch highway bridge. An initial monitoring study was set up to track the spread and abundance of snails in the Snake River drainage below YNP.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.
	Upper Bar BC Spring Creek	Habitat improvement for spawning SRC was conducted with spawning riffles and channel alignment changes. Trout Unlimited and Teton National Park were cooperators in this project.
1999	Blue Crane Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Drainage-wide	Continue survey of Snake River drainage to assess distribution of YSC and SRC. Forest Service crews and monies are carrying most of the field work.
		90 SRC, 90 mountain whitefish, 13 brown trout, and 3 rainbow trout were tested for the presence of <i>Myxobolus cerebralis</i> .
	Fish Creek	Made redd counts to determine relative size of spawning run, and well being of Snake River SRC fishery.
	Snake River	Conducted a Programmed Creel Survey to determine the use and general well being of the SRC fishery.
		Monthly monitoring (July – October) of the Snake River near the Flagg Ranch highway bridge was conducted to follow the presence of New Zealand mud snails and their effect on invertebrates in that segment of the river.
	Spring Creek	Redd counts were made to determine relative size of spawning runs, and the general well being of the Snake River SRC fishery.

Lander Management Region.

DATE	WATER	ACTIVITY
1989	Wind River	An instream flow assessment was conducted with resulting recommendations and filings. The report entitled, <i>2/89 Wind River instream flow report</i> , identified flows necessary during critical cutthroat life stages.
1992	Pelham Lake	The lake was reclaimed and stocked to reestablish native Yellowstone cutthroat.
		Special regulations were implemented to restrict the harvest of native Yellowstone cutthroat.
1993	Bear Creek	Fish habitat improvement structures were constructed to enhance the habitat for native cutthroat population.
	East Fork of the Wind River drainage	A regulation change was implemented to limit harvest and protect native cutthroat stocks.
		An extensive habitat evaluation was completed under the direction of Dr. Allen Binns. The Wyoming Game and Fish administrative report entitled, <i>A summary of fish habitat investigations in the East Fork of the Wind River drainage-1992</i> documented fish habitat in the drainage with special emphasis on native cutthroat in the system.
		An instream flow assessment was conducted on the drainage. The report entitled, <i>Instream flow investigations on the Spence Moriarity Wildlife Management Area, Fremont County</i> , identified flows necessary during critical cutthroat life stages.
1998-99	Wind River	An evaluation of the fishery was conducted to determine composition and contribution to angler catch of various population elements including stocked Yellowstone cutthroat.
2000	Wiggins Fork River	Stocking request is scheduled for Yellowstone cutthroat to supplement current cutthroat population.

Sheridan Management Region.

DATE	WATER	ACTIVITY
1958	Lick Creek – Little Bighorn drainage (LBH)	Initial plant of cutthroat.
1959	Goose Creek – Tongue River drainage (TR)	Closed Goose Creek from VA Hospital upstream to large falls to fishing all year.
	Tongue River	Cutthroat were not found during the initial fish management surveys although stocking records indicate cutthroat were stocked in 1933-37, 1938 and 1946.
1960	Goose Creek – TR	Fishing prohibited upstream from VA to Forest boundary.
	North Tongue River	No cutthroat found during initial crew management surveys even though records indicate cutthroat were stocked as early as 1937 irregularly through 1972. Fine-spotted YSC (SRC) were introduced in 1961 in an effort to establish a salmonid species that would reproduce successfully.
	Tongue River	Increased whitefish limit to 25 per day, 3 day possession limit – in addition to regular trout limit.
	West Fork Little Bighorn - LBH	Streams in the West Fork Little Bighorn drainage, an area that has the best chance of finding isolated populations of YSC, have been managed as wild (no stocking) since the early 60's.
1961	North Tongue River – TR	Introduced fine spotted YSC with objective to establish reproducing population of trout.
	Tongue River	Seasonal (5/1-10/31) opening of fishing upstream of USFS boundary to Turkey Creek.
1963	Dry Fork – LBH	Closed fishing from double springs to LBH.
	Little Bighorn	Closed fishing on LBH from MT/WY stateline upstream to mouth of Leaky Mountain Fork.
	North Tongue and Bull Creek – TR	Evaluation of past cutthroat stocking indicated fair survival of past plants. No further stocking recommended in 1964 to evaluate natural reproduction
	West Fork LBH	Closed fishing in drainage.
1964	Bull Creek – TR	Spawning site investigations and enhancement done within Bull Creek in attempt to improve natural reproduction.
		Natural reproduction studies using stream hatching baskets. Basket placed eggs had better success than gravel spawned eggs – spawning improvements and livestock exclosure recommended.
	Calvin Lake – TR	Fine spotted YSC stocking initiated.
	Little Bighorn drainage	Dropped regulations made in 1963.
	Little Goose Creek – TR	Electrofishing survey found wild RBT and BNT present – no stocking recommended.
1965	Amsden Creek – TR	Restricted fishing season (5/1-01/31) within Elk Pasture (where YSC populations existed).
	Bull Creek – TR	Fish habitat improvements installed in upper reaches of Bull Creek.
	Bull Creek – TR	Artificial spawning bed constructed along with 9 digger logs installed in upper reaches to increase natural reproduction for cutthroat. Evaluation began and continued for subsequent years.
	Goose Creek	Restricted fishing season (5/1-10/31) from VA to first falls.

DATE	WATER	ACTIVITY
	North Tongue River	Electrofishing in shallow side water areas revealed successful cutthroat reproduction from original SRC plants. Continued cutthroat stocking recommended.
	North Tongue and Bull Creeks – TR	Evaluations of cutthroat stocking and angler harvest. Natural reproduction expected to be limited in Bull Creek due to hard substrate.
	Tongue River	Seasonal (5/1-10/31) opening of fishing extended to mouth of South Fork Tongue.
1966	South Tongue River – TR	Evaluation of habitat improvements (rock placement) resulted in larger fish in improved area compared to unimproved.
	Tongue River	Stream channel cleared on private lands, reducing trout habitat. Due to WGFD comments, WDOT installs boulders in stream when building bridges to restore some habitat. Investigation of Dayton sewage impacts recommend cleanup due to possible adverse affects on trout population.
1967	Big Willow Creek – TR	Survey found a few cutthroat present – recommended future stocking to bolster population. Habitat conditions poor – heavy livestock impacts, recommended fencing of riparian area and consideration for habitat enhancement.
	Fool Creek – TR	Survey found a few cutthroat present – recommended future stocking to bolster population.
	Goose Creek	Closed to fishing from VA to first falls.
	Lake Creek – LBH	Survey found a few cutthroat present – recommended future stocking to bolster population.
	Tongue and LBH drainages	Reduced creel limit from 10# to 8# and 1 game fish, not to exceed 10 game fish per day.
1969	Big Willow Creek – TR	Electrofishing survey collected cutthroat from past plants – all but 3 determined to be from 1968 plant.
	Calvin Lake – TR	Evaluation of cutthroat stocking – found cutthroat present.
	Fool Creek – TR	Electrofishing survey collected cutthroat from past plants, but no indication of reproduction. Recommended sub-catchable cutthroat be stocked alternate years.
	Lake Creek – LBH	Electrofishing survey collected cutthroat from 1968 plant.
1970	North Tongue River – TR	Electrofishing surveys conducted to determine extent and range of cutthroat resulting from stocking program.
	Twin Lakes – TR	Chemical treatment conducted to eliminate sucker and chub infestation – cutthroat scheduled for restocking.
1971	Big Willow Creek – TR	Electrofishing survey collected cutthroat from past plants.
	Fool Creek – TR	Electrofishing survey collected cutthroat from past plants, but no indication of reproduction.
	Lake Creek – LBH	Electrofishing survey collected cutthroat from past plants, but no indication of reproduction.
1972	Bull Creek – TR	Habitat/spawning livestock exclosure maintained.
	Prospect Creek – TR	New log structures (7) placed for fish habitat enhancement.
1973	Big Goose Creek – TR	Comments made regarding impacts to trout habitat on COE project to channelize stream.
	Little Bighorn River and East Twin Creek – LBH	Commented on diversion proposal – recommended minimum flow to maintain trout fishery.
1974	Fool Creek – TR	Monitored stream for silt impacts from timber logging operations.
1977	South Tongue river – TR	Livestock exclosures completed on stream.

DATE	WATER	ACTIVITY
1978	Fool Creek – TR	29 fish habitat enhancement structures installed in Fool Creek within and outside riparian livestock enclosures to provide more trout holding areas, improve growth and survival and aid in natural reproduction. 1.25-mile livestock enclosure installed.
	Tongue and LBH drainages	BKT limit allows 20 per day in addition to other limits on game fish.
1979	Fool Creek – TR	Additional 70 fish habitat structures installed. Fish population surveys initiated to evaluate success. By 1980 the stream had narrowed in width 57% and increased depth by 31%.
	Lake Creek – LBH	30 log plunge structures installed by USFS for trout habitat enhancement.
1980	Lick Creek – LBH	The stocking of Rainbow trout (RBT) has been discontinued.
	Little Bighorn River in Dayton meadows	Log plunges, deflectors, and floating logs were installed to enhance trout habitat. 1981 surveys found BKT population within improved area doubled.
	Pumpkin Creek – LBH	Survey for cutthroat found 9 YSC present.
1981	Little Bighorn and Dry Fork LBH	Survey of fishery and habitat related to proposed coal slurry pipeline found cutthroat hybrids along with RBT and BKT.
	Tongue River	Data collected on various salmonid life stage water discharge needs for spawning and rearing habitat in conjunction with filing for an instream flow for fisheries (filed in 1987).
1982	North Tongue River	15 trout habitat enhancement structures (log plunges, deflectors, tree revetments) placed in stream through upper reaches to provide more pool structure and improve trout growth, survival and reproduction. 1986 survey found 156% increase in number of cutthroat per stream mile and 236% increase in habitat capacity.
	Tongue and LBH drainages	Seasonal regulations on Tongue River is dropped and all waters on National Forest restricted to 12 trout per day, 1 over 20 inch per day or in possession.
1983	Elkhorn Creek – LBH	Survey of fish population on Kearns Unit found 9 “large-spotted” YSC in addition to BKT and no records of stocking could be found.
		Fish population estimate obtained documenting existence of YSC and BKT. No stocking recommended on top of this possible endemic population.
	North Fork West Pass Creek – LBH	Electrofishing and habitat survey for YSC found no fish present and possible barrier downstream on X-X Ranch. Area identified for possible YSC re-introduction site.
	Red Gulch Creek – LBH	Survey of fish population and search for YSC found no fish present, low stream flows, and recommended no stocking.
	West Fork South Tongue – TR	Cutthroat (1000) stocked in attempt to establish species within abundant BKT population.
1984	Bull Creek – TR	Electrofishing surveys found poor survival of infrequently stocked SRC and recommended annual stocking of cutthroat.

DATE	WATER	ACTIVITY
	General creel regs	Statewide limit changed to 6 trout, 1 over 20" per day or in possession. Bonus BKT limit of 10 less than 8 inches in addition to regular creel limit in attempt to improve growth and reduce competition with other trout species. Bighorn NF still has 12 trout per day limit on general regs.
	Lick Creek – LBH	Trout habitat enhancements built to improve growth and survival, and sustain adult spawning population.
	North Fork West Pass Creek – LBH	YSC introduced to restore native species in unoccupied area based on previous sampling. YSC stocking and evaluations have continued to present. Some natural reproduction documented.
		YSC introduced into stream section on Kearns Unit. Subsequent surveys documented success of stocking and some natural reproduction. Periodic stocking of pure YSC continues to present.
1985	Dry Fork Little Bighorn	FERC application for Dry Fork and Ridge Reservoir and possible developments at several other sites. Comments on development made relative to fisheries and native fish impacts.
	Lick Creek – LBH	Stocking of fine-spotted YSC cutthroat was initiated.
	North Tongue River	Trout production estimates from HQI within habitat improvement area falls short of prediction – possibly due to emigration of SRC out of area. Recommended experimental plant of RBT in 1986.
1986	Bull Creek – TR	Fish habitat enhancement structures (8 log overpours, 3 rock deflectors, 120' tree revetment, 60' of rock riprap) installed in restricted grazing pasture on Bull Creek to provide more trout holding areas, improve growth and survival and aid in natural reproduction. Habitat quality (via HQI) and trout standing crop showed marked increase by 1987.
	Bull Creek – TR	Electrofishing 1,000+ feet of stream recovered only 4 cutthroat from 1985 plant before habitat improvements.
	Dry Fork Little Bighorn River	Instream flow crew collected data through 1993 to assess fisheries impacts from proposed water development projects in the drainage. Reports on file for each year worked on the project
	East Goose Creek – TR	Electrofishing survey found no reproduction from 1983 cutthroat stocking made to establish species. BNT and BKT reproduction excellent – high competition for cutthroat establishment.
	Fool Creek – TR	Inspection of habitat structures recommended WGFD maintenance.
	Lick Creek – LBH	Regularly scheduled fish population surveys monitor SRC introductions for survival and growth – finding slower growth in cutthroat than for RBT.
	West Fork South Tongue – TR	1,000 fine-spotted YSC (SRC) stocked in attempt to diversify fishery.
1987	Lick Creek – LBH	Survey of fish population and habitat noted livestock grazing damage to riparian area and a livestock exclosure was recommended.
	Little Bighorn River	Wild and Scenic River study awarded by USFS – WGFD comments provided relative to impacts on native fish stocks and recreational fisheries.
	North Tongue River	Surveys of fish population noted carryover of stocked cutthroat trout is very low (speculated due to angler harvest and lack of natural reproduction). Studied possible downstream emigration out of area and found relatively little.

DATE	WATER	ACTIVITY
	Tongue River	An instream flow water right with a 1987 priority date was granted in 1990 for a 8.28 mile segment of the Tongue River downstream from the confluence of the North and South Forks of the Tongue.
1988	Big Willow Creek – TR	Habitat improvement completed for 40 tree and rock plunges and 130' of tree/rock revetment in effort to increase trout carrying capacity, survival and growth.
	Duck Creek – Powder R.	Fish population survey found largely unoccupied habitat – recommended possible YSC introduction to expand range if livestock grazing could be controlled.
	Little Bighorn above Dayton Gulch Creek	Began habitat and fish population surveys to determine best fish management practices, species presence and abundance, and recommend/evaluate habitat changes. Surveys are routinely completed every 2-3 years as continuing evaluation.
	Long and Ringbone Lakes Powder R. drainage	Introduced YSC in renovated wilderness lakes to expand range, provide refugia and diversify fishery.
	North Tongue River – TR	Programmed creel survey determined heavy angler use of planted fine-spotted YSC – recommended angler harvest restrictions. Initiated long-term evaluation of stocked cutthroat survival, growth, and reproduction under revised angler harvest regulations.
	Various – starting in 1988 on these waters	YSC have been stocked in recent years in the Powder River drainage in Long and Ringbone Lakes (Cloud Peak Wilderness), Lake DeSmet, and in Tie Hack Reservoir.
1989	Big Willow Creek – TR	Annual stocking of fine-spotted YSC (SRC) to diversify fishery and attempt to establish self-sustaining population. Periodic monitoring of population indicated poor carry-over (possible heavy angler harvest). Recommendations made in 1994 PR regarding deteriorated riparian condition and water quality impacts.
	Bull Creek – TR	Whirling disease samples collected on trout to assess possible impacts to cutthroat population – results negative (no disease).
	Little Bighorn	Direct flow water right was approved in 1996 (with a 1989 priority date) for a 4.4 - mile segment of the Little Bighorn River below the confluence of the Dry Fork Little Bighorn.
	Little Bighorn River at Dayton Meadows	The Progress Report recognized YSC population may be difficult to establish due to fishing pressure and competition with BKT, but recommend attempt to reestablish YSC because it is the species native to the drainage.
	Lodgegrass Creek – LBH	Nine cutthroat submitted to Dr. Behnke for meristic analysis.
		Fish population survey to document presence of possibly pure YSC from endemic stocks or stocking in headwaters in 1945, 56 or 58. Samples submitted for analyses.
	North Tongue River – TR	Discontinued rainbow trout stocking in upper drainage.
	Sibley Lake – TR	Fine spotted YSC stocking initiated.
	Twin Lakes – TR	Impact assessment on fisheries associated with proposed development of the Sheridan Area Water Project expansion. Surveys looked at fish populations, habitat, and flow impacts associated with proposed water storage in the Goose Creek drainage.

DATE	WATER	ACTIVITY
1990	Amsden Creek – TR	Sampled fish population based on angler report of catching YSC in this stream within their historic range. Found no cutthroat present but recommended no change in management pending possible YSC presence.
	Big Willow Cr. – TR	Electrofishing survey found 96.1% (all species combined) increase in trout numbers since habitat improvement
	Bighorn National Forest	12 trout limit dropped – statewide regulations apply. Bonus BKT still applies statewide.
	Bull Creek – TR	Implemented restrictive angling regulations on entire drainage – all trout except BKT to be released; use of flies and lures only. Protection of fine spotted YSC from harvest.
		Electrofishing survey of cutthroat population found 40% increase in numbers since 1988.
	Hope Lake – TR	Barren wilderness lake once containing YSC (previously stocked) put on stocking schedule for periodic plants of pure YSC.
	Little Bighorn River	YSC stocking in upper portion of drainage initiated.
	Lodgegrass Creek – LBH	Submitted photos of collected YSC to Dr. Behnke for reference.
	North Tongue River – TR	Implemented restrictive angling regulations on about 3 miles of stream above Bull Creek – all trout except BKT to be released; use of flies and lures only. Protection of fine-spotted YSC stocks from harvest. Extended to headwaters and tributaries in 1996.
	North Tongue and Bull Creek	Regulations requiring release of all trout except BKT from mouth of Bull Creek to Hwy 14A crossing on North Tongue and all of Bull Creek. Restrictions on tackle use to flies and lures only. Attempt was to protect fine spotted YSC from harvest to establish spawning population.
	Park Reservoir – TR	YSC introduced to diversify fishery and provide native trout fishery in reservoir.
	Pumpkin Creek – LBH	USFS personnel collected YSC specimens - submitted to Behnke.
1991	Fool Creek – TR	Explored lower reaches to mouth of canyon by horseback and angling to locate barriers and downstream extent of YSC – no YSC found, determined future sampling sites for electrofishing.
		Stocking of fine spotted YSC began along with evaluations of fish populations to determine most compatible trout species for fishery.
		Species management changed to stocking YSC in attempt to establish reproducing native species in drainage.
1992	Big Willow Cr. – TR	Electrofishing surveys found low survival of previously stocked YSC – recommended additional monitoring.
		Survey to evaluate success of cutthroat stocking found 230% increase in numbers since 1991. Recommended consideration of restrictive angling regs to limit harvest.
1993	Bull Creek – TR	Fish population survey found 558% increase in cutthroat population since 1989 (before restrictive regulations).
	Pumpkin Creek – LBH	Two cutthroat submitted to Dr. Behnke for meristic analysis.
	Dry Fork Little Bighorn River	Entire drainage was hiked to assess fish migration barriers and look for isolated populations of YSC (none found in cursory surveys), relative to proposed water development in the drainage.
	Fool Creek – TR	Will discontinue stocking of RBT and stock only with YSC.
	Little Bighorn River	Stocking of rainbow trout discontinued in upper drainage to reduce

DATE	WATER	ACTIVITY
		chances of crossing with YSC, although no natural reproduction for either species documented.
1994	Little Bighorn River	Regulation requiring release of all cutthroat from mouth of Dayton Gulch Creek upstream on LBH River. Attempt was to protect introduced YSC from harvest.
	Little Bighorn at Dayton Meadows	Regular monitoring of YSC introductions indicates relatively low adult survival with greater biomass in habitat improvement areas.
	Mann Creek – LBH	Cutthroat specimens submitted to Dr. Leary for DNA analysis. Analysis reported 95% YSC purity. – some hybridization indicated.
	Mann Creek watershed – LBH	Site visit and comments to USFS relative to protecting possible YSC stocks and stream habitat in watershed based on proposed salvage timber sale.
	Pass Creek drainage – LBH	Authorized stream habitat enhancement and subsequent compatible stocking of YSC on private lands on the East and West Forks.
1995	Little Bighorn	Upper drainage above Dayton Gulch Creek – managed under the Unique Species concept for YSC.
	Tongue River drainage	Basin Management Plan prepared to direct most management action for this drainage within historic YSC range. Plan calls for increased management/inventory of native fish populations in the drainage.
	Wolf Creek – TR	Worked with landowner to advise and recommend approval for COE permit to improve trout habitat in this stream once noted for historical occupancy and reproduction of YSC. Habitat and stream flow changes anticipated by landowner could restore Wolf Creek as one of major spawning tributaries to the Tongue River.
1996	Lick Creek – LBH	Cutthroat stocking changed from SRC to YSC for native species recovery attempt. Began evaluation of introductions.
		Species management changed to stocking YSC in attempt to establish reproducing native species in drainage.
		With no reproduction on SRC, management changed to stocking YSC as native species in drainage.
	Little Bighorn drainage	Basin Management Plan prepared to direct most management action for this drainage within historic YSC range. Plan calls for increased management/inventory of native fish populations in the drainage.
	Little Bighorn River	Regulation (1994) restricting harvest of YSC extended to include all tributaries upstream of Dayton Gulch Creek.
	North Tongue River and Bull Creek	1990 regulation restricting harvest to only BKT extended upstream to head of drainage and all tributaries.
	Tongue and Little Bighorn drainages	Assisted USFS Bruce May gather data and identify suspected historic range and present occupancy of YSC/SRC in the Sheridan Region.
1997	Goose Creek drainage	Basin Management Plan prepared to direct most management action for this drainage within historic YSC range. Plan calls for increased management/inventory of native fish populations in the drainage.
	Lick Creek – LBH	Fish population evaluations of previous YSC introductions recovered no evidence of natural reproduction. Lack of winter habitat noted as possible reason.

DATE	WATER	ACTIVITY
	Wolf Creek (TR)	Completed instream flow studies on this historic endemic YSC stream to determine habitat quantity and quality for trout. Minimum flows were identified to maintain physical habitat for spawning and various life stages during critical periods of the year. Interest in maintaining and improving flows in the stream by the landowner and WGFD personnel would increase potential to restore YSC to this drainage. Sections of the stream have been included within conservation easements with the Nature Conservancy (Annear, Thomas, Project IF-SN-8CC-511, 1998).
1998	Big Willow Creek – TR	Discontinued catchable RBT stocking – switched to SRC catchables to be compatible with N. Tongue cutthroat management.
	East Fork Pass Creek – LBH	Met with USFS to address possible impacts to fish in this native YSC drainage from proposed livestock pond construction in watershed.
	Little Bighorn River	Modified 1996 regulation on YSC to include the release of all trout except BKT to avoid confusion and violations due to angler's inability to identify cutthroat. Instituted restrictive tackle regulations (flies and lures only) to reduce hooking mortality.
1999	Little Bighorn River	Initiated comprehensive survey of Little Bighorn drainage to document YSC presence, population dynamics, genetic purity, and habitat conditions. This is a continuing survey in cooperation with USFS to complete YSC survey of the Little Bighorn and Tongue drainages over about the next 5 years.

Cody Management Region (1955-1998).

Basin: Upper Shoshone River Drainage (2US).

The Upper Shoshone River drainage consists of two major forks of the Shoshone River; the North and South Forks. The overall drainage area is approximately 1,538 square miles. The drainage is considered native Yellowstone cutthroat range but is dominated by rainbow in the North Fork and brown trout in the South Fork. The WGFD currently manages this drainage for native sport fisheries with focus on conserving YSC.

The fishery has been studied in detail with results contained in Kent (1973, 1974, 1984 and 1995). In addition, a cooperative study between the WGFD and the University of Wyoming (Kruse, 1998) focused on the distribution of native, genetically pure Yellowstone cutthroat trout in Northwestern Wyoming (Table 1). In the N.F. Shoshone watershed all 58 streams sampled showed hybridization with RBT. Individual, genetically pure YSC were documented, but always in co-existence with hybridized fish. The Trout Creek drainage was not a part of this study but has been found to contain pure (meristically) YSC that co-habitate with potentially hybridizing Rainbow and Snake River cutthroat trout. Of the 24 tributaries supporting trout in the SF Shoshone River drainage, five were documented as containing genetically pure YSC: East Fork Creek, Genetain Creek, Marquette Creek, Younts Creeks and portions of mainstream SF Shoshone River. A wild population of pure YSC has become established in Hunter Lake – tributary to Bear Creek and then N.F. Shoshone River.

Stocking:

Historically, stream stocking began in the N.F. (early 1900's) and the S.F. (1930's). The earliest introduction of non-native salmonids occurred in 1919. Brook, brown and rainbow trout were all commonly introduced until the early 1970's. From 1972-71, non-indigenous finespotted cutthroat trout from the Snake River drainage were introduced into the watershed. More recently, as native fish conservation has come to the forefront and the problems of hybridization and competition have become apparent, only YSC have been stocked sparingly since the early 1980's.

Harvest/Fishing Regulations:

The status of the Upper Shoshone River drainage fishery has been monitored by extensive, programmed creel surveys over the years. The S.F. Shoshone River (1962, 1974), the N.F. Shoshone River (1978, 1979 & 1991) and Buffalo Bill Reservoir (1971-72, 1977-78 and 1994-95). Fishing regulations on the drainage have been in force since the late 1960's to protect this wild fishery from over harvest. A spring closure (April 1 – July 1) from the inflow of Buffalo Bill Reservoir upstream to Newton Creek protects migrant spawners and enhances reproductive success in some 23 miles of river. In addition, a three trout limit (only 1 over 20") is half the general statewide limit. Special regulations also protect

Table 1. Estimated effective population sizes (EPS) for 24 of the 27 streams containing genetically pure Yellowstone cutthroat trout.

Stream	Mean number of cutthroat trout per 100-m reach	Total Stream km containing cutthroat trout	Estimated population size	Estimated EPS
Anderson	12.79	9.35	1196	630
Cow	13.95	4.65	649	342
Eleanor	8.39	5.61	471	248
Francs Fork	25.57	16.14	4127	2175
Greybull River	21.90	47.71	10450	5507
Jack	18.15	3.86	700	369
NF Pickett	10.06	6.00	604	318
Pickett	8.48	19.52	1654	872
Piney	4.94	7.78	384	203
Red	10.85	1.16	125	66
SF Anderson	2.22	2.72	60	32
Venus	8.55	8.63	737	389
Warhouse	17.42	1.86	323	170
WF Timber	17.60	10.05	1768	932
Brown	22.71	2.53	575	303
Chimney	12.89	5.04	650	342
Deer	3.89	3.59	140	74
Dundee	3.42	0.82	28	15
Middle Wood	23.21	17.78	4128	2175
SF Wood	39.37	7.28	2865	1510
Wood River	18.00	9.61	1731	912
East Fork	6.78	7.00	475	270
Genetain	8.95	1.61	145	82
Younts	11.95	2.70	322	183

migrant spawners staging or returning to the reservoir. The upper 1/3 of the reservoir is closed to fishing from April 1 – July 15 and the limit is four trout – more conservative than the general creel limit. A protective regulation implemented in 1986, limiting the harvest to only one Yellowstone cutthroat, was dropped in 1996 after studies failed to document that the cutthroat population was being enhanced by the regulation (Kent, 1995).

Habitat Enhancement:

In 1999 the WGFD entered into a cooperative project with USFS, Wyoming State Parks, Trout Unlimited, and affected landowners to restore/enhance the reproductive potential and migratory corridor of Trout Creek. Project will include diversion structure modification to pass upstream migrants and discourage entrainment of returning spawners/recruitment, bank stabilization, riparian fencing and the utilization of best management practices. This project will benefit Yellowstone cutthroat trout.

More detailed information regarding Upper Shoshone River drainage present management strategies and future management objectives are presented in the Basin Management Plan (2US).

Basin: Greybull River Drainage (2GF).

The Greybull River drainage consists of tributaries characterized by high elevation, steep channel slopes, unstable substrates and large fluctuations in discharge. Streams containing trout are primarily located in the upper reaches of the drainage from the confluence with the Wood River upstream. Lower elevation portions are impacted by irrigation dewatering, higher water temperatures and diminished trout habitat. The WGFD currently manages this drainage as a native sport fishery with focus on conserving YSC.

The fishery has historically been considered native YSC range and has received some special study (Yekel, 1980 and Kruse, 1995). In a recent study by Kruse, 22 streams were found to have genetically pure YSC while 20 of these streams supported only YSC and no other hybridizing or competing species. Pure YSC currently occupy 45% of perennial streams in the drainage. Table 3 from Kruse's thesis (attached) lists those streams. This drainage holds the most promise in Northwestern Wyoming for special management/conservation options to perpetuate and enhance native Yellowstone cutthroat trout. This drainage and the upper Yellowstone River are not immediately threatened by exotic trout and are the most secure of the remaining YSC populations in the Cody region.

Stocking:

The earliest recorded stocking of exotic species occurred in 1915 when rainbow trout were used in the drainage. This species did not persist and appear to have had no genetic influence on native cutthroat. Unknown cutthroat strains were stocked from September 1959, until August of 1971. Snake River cutthroat were stocked in 1971-72 and are probably the source of genetic introgression. SRC stocking was discontinued in 1976. In recent years, stream stocking has been limited to YSC in headwater tributaries: Cow, Anderson, Venus and Eleanor Creeks.

Harvest/Fishing Regulations:

No special fishing regulations are currently in force. The Cody Region Fisheries Management Crew will consider protective fishing regulations to protect YSC in 2002-2003.

Habitat Enhancement:

Geologic instability plagues the fisheries habitat in the upper reaches of this drainage. Channel classification is predominately type 2A characterized by high gradient, straight, entrenched mountain streams (Rosgen 1994). Over 60% of the streams have gradients greater than 4% (Kruse, 1995). Due to this fact, all past and future instream work has/will be limited to bank stabilization and riparian improvement.

More detailed information regarding the Greybull River drainage, present management strategies and future management objectives are presented in the Basin Management Plan (2GR).

Basin: Upper Yellowstone River Drainage (2YS).

All waters are in Teton Wilderness and are managed exclusively for wild YSC. This area is one of the last enclaves for indigenous YSC and is characterized as a highly migratory population. Most adult fish move upstream from Yellowstone Lake to the tributaries to spawn. Many small streams act as nursery areas while few adults remain in the river past late August. Bridger Lake, tributary to the mainstream Yellowstone River, supports a resident population of wild YSC.

Kruse (1995) found this drainage, including the Thorofare and Atlantic Creek tributaries, to be the most secure of all the remaining YSC populations in Northwest Wyoming. No rainbow or Snake River cutthroat trout genes were detected in any of the streams sampled. The downstream presence of Yellowstone National Park substantially reduces the risk of exotic trout invasion. However, the recent discovery of lake trout and whirling disease is downstream Yellowstone Lake are potential threats to this population.

Stocking:

The drainage is managed wild with no current supplemental stocking. The first recorded stocking occurred in 1965 and 1966. Cutthroat from the Auburn Hatchery were stocked into a section of river in Woodard Canyon. In addition, the S. F. Yellowstone River has received transplants (1977-82) from Sedge Creek, attempting to establish a viable resident population. In 1981 and 1982, a transplant of YSC from Sedge Creek (YNP) was introduced into Senecio Creek, a tributary to Atlantic Creek. Survival of these plants was documented and no future stocking has occurred.

Harvest/Fishing Regulation:

A special YSC protective fishing regulation has been in effect on the Yellowstone River drainage upstream from YNP boundary since 1986. This regulation only allows the harvest of two trout per day.

Habitat Enhancement:

Two relatively recent natural events have impacted the habitat of this drainage. Torrential flooding in 1981, and fires in 1988 caused widespread soil erosion, channel morphology changes and loss of trout cover. While these events will likely benefit habitat in the long-term, the recovery of YSC have been slow.

More detailed information regarding Upper Yellowstone River drainage and future management objectives are presented in the Basin Management Plan (2YS). Management options discussed by Kruse (1995) will also be evaluated for the 2002-2003 fishing regulation period.

Basin: Clarks Fork River Drainage (2CF).

A tributary to the Yellowstone River, this drainage covers some 1,154 square miles. The drainage is managed in three sections. The uppermost is 15.0 miles long and extends from the Montana state line downstream to Reef Creek. Primary species include brook, rainbow and Yellowstone cutthroat trout. There are some remnant influences from SRC stocked periodically to 1977. Yellowstone cutthroat trout have been the only species stocked since 1981 and all stocking was discontinued (1993) due to poor survival.

Extensive sampling by the Cody fisheries crew and Kruse documented only a single, introduced population of genetically pure YSC in the drainage. The YSC population in Muddy Creek has been isolated by a natural barrier and no other trout are found upstream from the barrier. The genetic source of this population is unknown. Self-sustaining and/or supplemented populations of YSC are found in 12 lakes in the headwaters of the drainage. Some lakes are inhabited only with YSC while others also support competing and/or potentially hybridizing species. Genetic purity of these populations should be determined.

Stocking:

Even though the Clarks Fork drainage is considered native Yellowstone cutthroat range (Varley 1988), the likelihood that this subspecies of cutthroat existed above the canyon falls is doubtful (Jordan 1891). Plants of genetically pure YSC were made at numerous sites in the 1950's and 1960's and more recently since 1978. In most habitats, progeny of these stocks have hybridized with rainbow or the Snake River variety of cutthroat. Stocking since 1978 has been done in hopes of providing some kind of competitive edge over the highly successful rainbow or for reintroduction measures in areas above barriers where isolation will protect the purity of stocks. The section is currently managed as a wild fishery with no stream stocking since 1992.

Harvest/Fishing Regulation:

In an attempt to increase the average size component and protect potential spawners, a special regulation was implemented in 1990. The regulation allows the harvest of six fish but all fish over 8 inches in length must be released. Terminal tackle is restricted to artificial flies and lures. Subsequent sampling indicates increases in the average size of both rainbow and Yellowstone cutthroat.

The middle portion (Canyon) of the Clark's Fork River is managed as a wild fishery. The 20.5 miles reach is characterized by steep canyon walls with a series of rapids and falls that isolate the YSC, RBT and BKT populations above from the primarily BNT, YSC and GRL fishery below the falls.

Stocking:

YSC were stocked in this section until 1993. Plant evaluations indicated poor survival. It was hoped that the supplemental stocking, coupled with naturally recruited YSC, would result in large enough population levels to compete with exotic trout. But, sampling from 1995-1999 indicates that YSC numbers have declined without stocking.

Harvest/Fishing Regulations:

To protect this unique canyon fishery from over exploitation, a special regulation was instituted in 1990. The limit on the Clark's Fork River from the Forest Service boundary upstream to Reef Creek was set at three trout per day or in possession; with only one to exceed 12 inches.

The lowermost section of the Clark's Fork River extends some 24 miles from the downstream mouth of the canyon to the Montana state line. The habitat is characterized by wide, shallow and U-shaped channel where natural reproduction is limited.

Stocking:

The section is managed wild for brown trout and native mountain whitefish. Annual plants of YSC, RBT and GRL supplement the fishing opportunity through the habitat improvement area.

Harvest/Regulations:

The standard statewide six fish limit (only one over 20") applies to this section.

Habitat Enhancement:

This section generally lacks cover and pool habitat. Good populations of wild YSC can be found in the Clark's Fork River where those components are adequate. Consequently, a three-year habitat improvement project (1983-1985) placed a number of random boulders, winged deflectors and over pour structures into the channel to create in-stream cover and pool habitat. The structures were modified with cabled trees in 1998. Currently, population levels, use, and harvest of the fishery are largely associated with these structures. YSC will continue to be stocked to provide anglers an opportunity to harvest this native fish while attempting to buffer the wild stock from harvest.

More detailed information regarding the Clark's Fork River drainage, present management strategies, and future management objectives are presented in the Basin Management Plan (2CF).

Management Applications For Yellowstone Cutthroat Trout.

The following management practices (Table 2) were utilized to protect or enhance Yellowstone Cutthroat trout stocks in other fisheries that occur in the Cody Fish Management Region.

Table 2. Cody drainage management practices for YSC enhancement.

DATE	WATER	ACTIVITY
	Basin 2PR	Paintrock Creek Drainage
1933-47	S. Fk. Paintrock Ck.	YSC fry and fingerling stocking
1970,71	S. Fk. Paintrock Ck.	YSC transferred to Clark's Fk. Hatchery to reduce brood stock in-breeding
1979,84	S. Fk. Paintrock Ck.	YSC transferred to Clark's Fk. Hatchery to reduce brood stock in-breeding
	Basin 2SC	Shell Creek Drainage
1933-47	Shell Creek	YSC Stocked throughout drainage
1939,42	Cedar Creek	YSC fry/fingerling stocking
1991,95	Cedar Creek	Cody Fish Crew confirms YSC that appear pure (meristically); no competing/hybridizing species present
1997	Cedar Creek	Carter Kruse collected YSC samples: determined to be genetically pure
1939,47	S. Beaver Creek	YSC fry/fingerling stocking
1999	S. Beaver Creek	YSC samples to be collected for genetic testing
	Basin 2PC	Porcupine Creek Drainage
1942-54	Porcupine Creek	YSC stocked throughout drainage
1942,56	Deer Creek	YSC fry/fingerling stocking
1992,94	Deer Creek	Cody Fish Crew confirms YSC that appear pure (meristically); no competing/hybridizing species present
1997	Deer Creek	Carter Kruse collected YSC samples: determined to be genetically pure

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